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10/563,577

06/21/2006

Jorge Ancheyta Juarez

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EXAMINER

MCCAIG, BRIAN A

ART UNIT

PAPER NUMBER

1797

MAIL DATE

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10/03/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/563,577 | Applicant(s) ANCHEYTA JUAREZ ET AL. | |
| | Examiner BRIAN MCCAIG | Art Unit 1797 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on September 4, 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Summary

1. This is the corrected Office action following the initial Office action sent the week of September 2, 2008, which was based on the 10/563577 application filed June 21, 2006 .
2. Claims 1-9 have been cancelled. Claims 10-28 have been added, are currently pending, and have been fully considered.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 10-14 and 19-24 are rejected under 35 U.S.C. 102(b) as being anticipated by EVANS ET AL (US 4657664), hereafter referred to as EVANS.**

5. With regard to claims 10-14, EVANS discloses [see, e.g., the abstract; column 7, lines 37-42; column 9, lines 33-46; column 10, lines 26-29; column 12, lines 10-11; Tables 3 & 4] a multi-stage process for the hydroconversion of heavy hydrocarbon feedstocks containing asphaltenes, metals, and sulfur compounds wherein the first stage is comprised of hydrodemetalation with a demetallation catalyst followed by hydrodesulfurization/hydrodenitrification with a desulfurication catalyst and reaction conditions including temperatures ranging from 371-454° C, pressures ranging from 70-211 kg/cm², liquid

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space velocities ranging from 0.1-5 per hour, and hydrogen feed rate of 356-2671 m³/m³, which overlaps the required ranges in the instant application.

6. With regard to claims 19-24, the discussion of EVANS in the preceding paragraph is incorporated herein by reference. In addition, EVANS discloses [column 10, lines 26-29] that in the reaction zones, catalysts may be employed in the form of a fixed-bed or ebullated-bed wherein the demetalation (first hydrotreatment) catalyst is comprised of a hydrogenation component selected from Group VIB metals such as molybdenum (Mo) and Group VIIIB metals such as nickel (Ni) which are deposited on an inorganic oxide support such as alumina and the desulfurization catalyst is comprised of hydrogenation metals selected from Groups VIB and VIIIB as well, which also includes Mo and Ni, respectively.

Claim Rejections - 35 USC § 102/35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 15-18, 26-28 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over EVANS ET AL (US 4657664), hereafter referred to as EVANS.**

9. With regard to claim 15, the discussion of EVANS in paragraph 7 is incorporated herein by reference. In addition, EVANS discloses [Tables IV and column 12, lines 10-11] that the solids concentration was 0.59 wt%, which is within the range required in the instant application

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as is the 0.63 wt% in Table IV. Furthermore, EVANS discloses that unit operability is difficult when the solids concentration is greater than 1 wt%. Therefore, it would be obvious to operate the process at temperatures with catalysts that will reduce the formation of sludge and sediments below 1 wt%, including the 0.65 wt% as required in the instant application.

10. With regard to claims 16-18 and 28, the discussion of EVANS in paragraph 7 is incorporated herein by reference. In addition, EVANS discloses [column 7, line 43-column 9, line 33] the same hydrodemetallation and hydrodesulfurization catalysts as the applicant in addition to the overlapping reaction conditions as described previously. Therefore, the applicant is reminded that where an applicant claims a composition in terms of a function, property or characteristic and the composition of the prior art is the same as that of the claim but the function is not explicitly disclosed by the reference, the examiner may make a rejection under both 35 U.S.C. 102 and 103, expressed as a 102/103 rejection. In addition, where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). In this case, claims 16-18 require particular properties of the product of the process which are not explicitly disclosed by EVANS but are likely to be coterminous with or at least overlap those in the application given the similar feedstocks, catalysts, and reaction conditions as previously discussed. Furthermore, when the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

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11. With regard to claims 26 and 27, all the discussions of EVANS in preceding paragraphs are incorporated herein by reference.

Claim Rejections - 35 USC § 103

12. **Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over EVANS ET AL (US 4657664) in view of TRUEBA ET AL in the *European Journal of Inorganic Chemistry*, hereafter referred to as EVANS and TRUEBA, respectively.**

13. The discussion of EVANS in paragraphs 7 and 8 are incorporated herein by reference. As previously discussed, EVANS discloses the use of an alumina support of which γ -alumina is perhaps the most important with direct application as a catalyst and catalyst support in the petroleum industry as evidenced by TRUEBA [paragraph 1, page 3393], which renders its use obvious to one of ordinary skill in the art.

Conclusion

14. The following is prior art made of record and not relied upon but considered pertinent to the applicant's disclosure:

a. ANCHEYTA ET AL in *Applied Catalysis A*, henceforth referred to as ANCHEYTA, with particular relevance to claims 15-16 and 18. ANCHEYTA discloses [see, e.g., the abstract; Tables 1 and 3] the hydroprocessing of a Maya heavy crude under substantially the same conditions as the application wherein the hydrocarbon feed comprises less than 80% by volume of the distillates recovered at 538° C (62.5%) [see Table 1, page 160] with an API gravity of 20.9°, which is less than 32° as required in

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claim 16 of the instant application. Furthermore, EVANS discloses an API improvement of 17.3 [see, e.g., Tables III and IV; Feed API 6.6° and Product API 23.9°], and ANCHEYTA further discloses [Table 3] a reduction in residue (distillation components boiling above 538° C) of 68%, which overlaps the range in claim 18 of the instant application.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRIAN MCCAIG whose telephone number is (571)270-5548. The examiner can normally be reached on M-F 8-430.

16. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Barbara Gilliam can be reached on (571)272-1330. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

17. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BAM

/Glenn A Caldarola/
Acting SPE of Art Unit 1797